# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

In the Matter of	)	
	)	
Advanced Television Systems	)	MB Docket 87-268
And Their Impact upon the Existing	)	
Television Broadcast Service	)	

TO: Office of the Secretary ATTN: The Commission

## PETITION FOR RECONSIDERATION BY FLORIDA WEST COAST PUBLIC BROADCASTING, INC.

Florida West Coast Public Broadcasting, Inc. (FWCPB), licensee of noncommercial educational television Station WEDU-DT, Tampa, Florida, through its attorneys and pursuant to Section 1.06 of the rules, hereby petitions for reconsideration of the technical parameters of the station's channel assignment in the *Seventh Report and Order* ("R&O) to correct azimuth pattern.

1. FWCPB filed Comments on the Seventh Further Notice of Proposed Rule Making ("Seventh FNPRM") seeking greater power and a correction of the assigned azimuth pattern. The licensee broadcasts omnidirectionally at 100 kW ERP on analog Channel \*3, which is not suitable for digital broadcasting. It was assigned an out-of-core transitional DTV channel on which it broadcasts omnidirectionally with a reduced power STA. It will move at the end of the transition to Channel \*13, a channel that is currently in use for commercial analog operations in the market. In the DTV channel selection process FWCPB lost protection for full replication of the Channel \*3 contour, despite the fact that it informed the Commission at every step of the way that it sought such replication. Instead it has been assigned reduced power with a directional antenna.

- 2. FWCPB is very reluctantly reconciled to living with reduced power, at least initially. The specification of a directional azimuth digital antenna, though, would needlessly force it to purchase a custom antenna at a substantial additional cost. As shown in the attached engineering statement, directionalization is not needed to protect other licensees. FWCPB's Comments included a request for greater power and specification of an omnidirectional antenna. The Commission's discussion of the Comments at paragraphs 68 and 69 of the *R&O* concluded that a combination of increased power and omnidirectional operation would produce excessive interference. The Commission did not, however, consider maintaining the currently assigned power but changing the antenna to omnidirectional.
- 3. The attached engineering statement notes that FWCPB had requested higher power even though there would be in excess of 0.1 percent additional interference. It did so based on an explicit statement in the 7<sup>th</sup> FNPRM that indicated that the Commission would be flexible in this area. Leaving behind the issue of higher power, the engineering statement shows that if the Commission does not change the antenna azimuth pattern from the assigned pattern to omnidirectional, the Channel \*13 post-transition station will have to reduce its ERP even further than shown in the DTV Table. However, the station at the assigned 17.1 kW and assigned height could broadcast with an omnidirectional antenna and cause only a predicted 0.01% additional interference to the station at issue, far below the standard limit of an additional 0.1%.

Based on this showing, FWCPB respectfully requests that the Commission change the antenna ID in the Final DTV Table of Allotments to specify an omnidirectional antenna for Station WEDU-DT, Channel \*13.

Respectfully submitted,

FLORIDA WEST COAST PUBLIC BROADCASTING, INC.

sy: \_\_\_\_\_

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Its Attorneys

October 26, 2007



Telecommunications Consulting Engineers

ENGINEERING TECHNICAL STATEMENT PREPARED BY WILLIAM T. GODFREY, JR. OF THE FIRM KESSLER AND GEHMAN ASSOCIATES, INC., TELECOMMUNICATIONS CONSULTING ENGINEERS IN CONNECTION WITH A PETITION FOR RECONSIDERATION OF THE SEVENTH REPORT AND ORDER AND EIGHTH FURTHER NOTICE OF PROPOSED RULE MAKING WITH RESPECT TO THE FLORIDA WEST COAST PUBLIC BROADCASTING, INC. POST-TRANSITION DIGITAL TELEVISION BROADCAST FACILITY, WEDU-DT CHANNEL \*13, TAMPA, FL.

The firm Kessler and Gehman Associates, Inc. was retained by the Florida West Coast Public Broadcasting, Inc (FWCPB), Tampa, Florida to prepare an engineering analysis in support of a Petition for Reconsideration of the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making (7<sup>th</sup> R&O) with respect to the operating parameters assigned to the WEDU-DT Channel \*13 post-transition facility as adopted in the Final DTV Table of Allotments (TOA).

#### **Discussion**

The FCC released the 7<sup>th</sup> Further Notice of Proposed Rule Making (FNPRM) on October 20, 2006 which included the proposed DTV Table of Allotments (TOA). As permitted, FWCPB filed comments prior to the January 11, 2007 deadline with respect to the proposed DTV TOA asking the FCC to correct the proposed parameters so that it could replicate its licensed Grade B contour. Specifically, FWCPB requested an increase in ERP and an azimuth pattern correction. In the 7<sup>th</sup> R&O, the FCC stated that:

The Commission's interference analysis based on recalculated Appendix B facilities shows that WEDU would cause 1.16 percent new interference to WTLV, Jacksonville, Florida (analog channel 12, post-transition digital channel TCD channel 13).



Accordingly, the FCC denied FWCPB's request since it determined that the proposed changes would not meet the applicable interference standard and since it was not yet providing service to the public.

FWCPB would like to state for the record that the parameters requested in its January 2007 comment filing were based solely on NTSC replication with the expectation that the small amount of additional interference would be built-in to the final DTV TOA. WEDU-DT was assigned out-of-core channel 54 for its digital allotment and in its 7<sup>th</sup> FNPRM (Para. 22), the FCC stated:

the Commission recognized that a special accommodation was necessary if a station with an out-of-core DTV channel elected to operate its post-transition DTV station on its in-core analog channel. The Commission stated that the 0.1 percent additional interference limit could be exceeded on a limited basis in order to afford these stations an improved opportunity to select their own NTSC channel.

FWCPB was not able to select its out-of-core digital channel for post-transition operation and its licensed in-core analog channel 3 was not a viable option for post-transition operation due to the well documented problems with impulse noise; especially in south Florida. Therefore, FWCPB elected Channel 13 as its post-transition channel with the expectation that the Commission would allow it to operate using NTSC replication parameters as promised in the 7<sup>th</sup> FNPRM for out-of-core DTV facilities that were never given the opportunity to replicate there NTSC Grade B coverage. Based on the FCC's comments, it was expected that special accommodation would be given to FWCPB and that the 0.1% additional interference limit could be exceeded so that it would have the opportunity to replicate the coverage that it has been providing to the public for decades. Even though the Commission stated that special accommodations would be provided specifically for this type station, the 7<sup>th</sup> R&O states that the





NTSC replication parameters for the WEDU-DT Channel \*13 facility were denied because the 0.1% additional interference limit was exceeded.

The Commission also stated in its 7<sup>th</sup> R&O that another reason for the denial is because WEDU-DT is not providing service to the public. WEDU-DT is not providing service to the public on Channel 13 yet; however it is clearly providing digital service to the public on its out-of-core digital Channel 54 facility. FWCPB does not have the option to flashcut to Channel 13 since that channel is currently occupied and will not be available until after the transition. Therefore, FWCPB shouldn't have been penalized for something that is completely out of its control.

As an out-of-core, non-commercial education digital television broadcast licensee, special accommodations were not provided to FWCPB as anticipated to replicate its Grade B coverage. Regardless, FWCPB hereby only requests that the FCC revisit its decision with respect to changing the azimuth pattern. As adopted in the Final DTV TOA (7<sup>th</sup> R&O), the FCC assigned (Antenna ID 75058) WEDU-DT Channel \*13 with a slightly directional antenna (Exhibit 1). If the FCC does not change the antenna azimuth pattern from the assigned pattern to omnidirectional, the WEDU-DT Channel \*13 post-transition facility will have to reduce its ERP even more to comply with the filing freeze that is still in effect. As stated herein, FWCPB will already not have the ability to replicate its NTSC Grade B coverage if the WEDU-DT Channel \*13 post-transition digital facility's azimuth pattern is not changed to omnidirectional, it will be even further restricted with respect to coverage by having to reduce ERP even more.

It was determined that the WEDU-DT Channel \*13 facility operating with an omnidirectional antenna, an ERP of 17.1 kW, and an antenna height radiation center of 473 meters above average terrain would be predicted to cause only 0.01% additional interference to the WTLV-D13 facility which is well below the 0.1% additional interference limit.



Telecommunications Consulting Engineers

Exhibit 2 is a Longley-Rice inbound interference study from the WEDU-D13 facility as specified in the Final DTV TOA and all other applicable surrounding post-transition digital stations to the WTLV-D13 facility as specified in the Final DTV TOA. Referring to Exhibit 1 it can be seen that the only station predicted to cause interference to the WTLV-D13 facility is WEDU-D13 (red cells). Exhibit 3 is a population report that was generated from the Longley-Rice study. Referring to Exhibit 3, it can be seen that the WEDU-D13 facility as specified in the Final DTV TOA is predicted to cause 1.829% interference.

Exhibit 4 is a Longley-Rice inbound interference study from the WEDU-D13 facility using a nondirectional antenna (17.1 kW ERP & 473 m AAT) and all other applicable surrounding post-transition digital stations to the WTLV-D13 facility as specified in the Final DTV TOA. Referring to Exhibit 4 it can be seen once again that the only station predicted to cause interference to the WTLV-D13 facility is WEDU-D13 (red cells). Exhibit 5 is a population report that was generated from the Longley-Rice study. Referring to Exhibit 5, it can be seen that the WEDU-D13 omnidirectional facility is predicted to cause 1.839% interference.

Therefore, the WEDU-D13 omnidirectional facility would be predicted to cause 0.01% additional interference to the WTLV-D13 facility. Accordingly, FWCPB respectfully requests that the FCC change the antenna ID in the Final DTV TOA so that the WEDU-D13 post-transition facility can operate with an omnidirectional antenna just like its licensed analog and digital facilities.

#### **Certification**

This technical statement was prepared by William T. Godfrey, Telecommunications Consultant with Kessler and Gehman Associates, Inc. having offices in Gainesville, Florida and has been working in the field of radio and television broadcast consulting since 1998. He graduated from the University of North Florida with a Bachelor of Arts degree in Criminal Justice and a minor in Mathematics in 1993. As a Professional in the field of



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Telecommunications he states under penalty of perjury that the information contained in this report is true and correct to the best of his knowledge and belief.

KESSLER AND GEHMAN ASSOCIATES, INC.

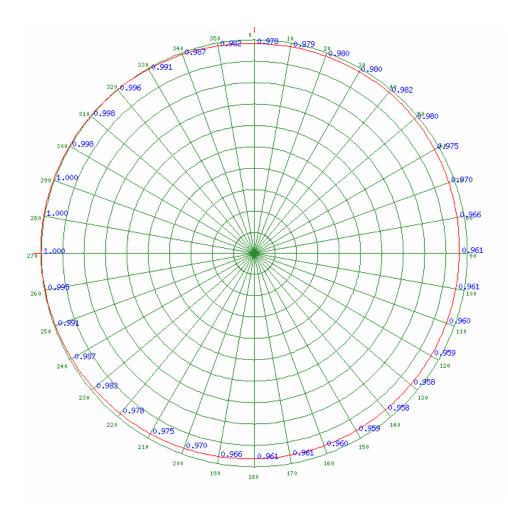
WILLIAM T. GODFREY, JR.

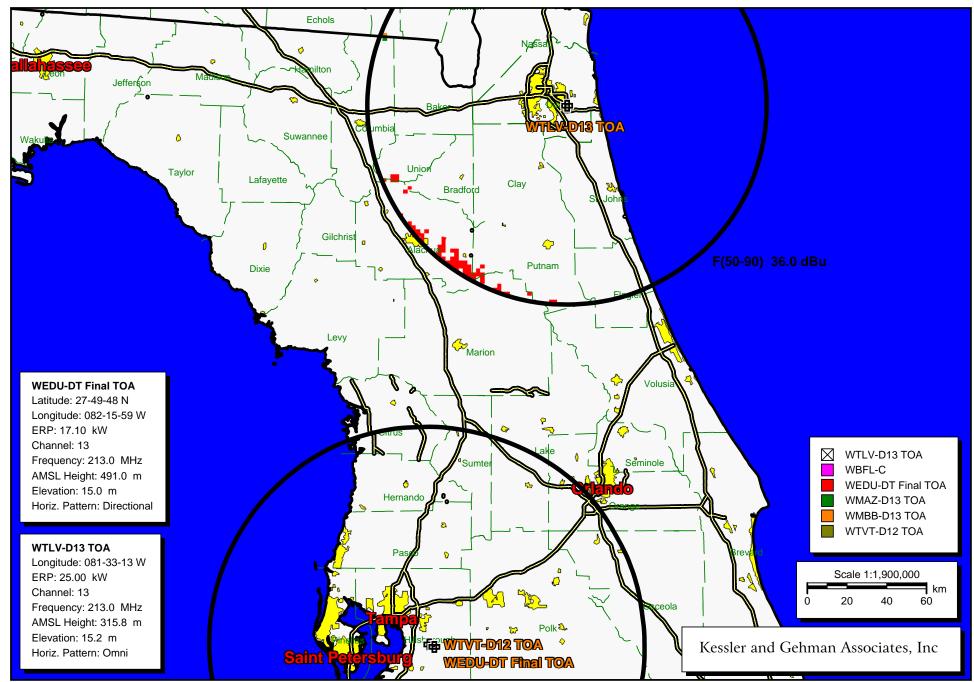
Telecommunications Technical Consultant

24 October, 2007

Antenna Make		M	odel			Service		Antenna Id
D54		FLTAME	'A13			DT		75058
ntenna relative field values:								
0° 0.978	10° 0.979	20°	0.98	30°	0.98	40°	0.982	50° 0.98
60° 0.975	70° 0.97	80°	0.966	90°	0.961	100°	0.961	110° 0.96
120° 0.959	130° 0.958	140°	0.958	150°	0.959	160°	0.96	170° 0.961
180° 0.961	190° 0.966	200°	0.97	210°	0.975	220°	0.978	230° 0.983
240° 0.987	250° 0.991	260°	0.995	270°	1	280°	1	290° 1
300° 0.998	310° 0.998	320°	0.996	330°	0.991	340°	0.987	350° 0.982

#### Relative Field Polar Plot





#### Inbound Longley-Rice Interference Study (WEDU-DT Final DTV TOA)

Kessler and Gehman Population Report

WTLV-D (13) Jacksonville, FL - BLCDT20040421AAH

Broadcast Type: Digital Service: T

Lat: 30-16-24 N Lng: 081-33-13 W ERP: 25.0 kW AMSL: 315.8 m

TV Incoming Interference Study

Interference Considered Within: Noise Limited FCC Contour

Signal Resolution: 2.0 km

LR Profile Spacing Increment: 1.0 km

Consider NTSC Taboo: Yes

# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.

Threshold for reception: 36.0

Pop Centroid DB: 2000 US Census (SF1, Housing)

Study Date: 8/14/2007

TV Database Date: 8/11/2007

Primary Terrain: 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Percentages calculated using a baseline population of 1,407,226.

Stations which cause interference:

Call Letters	H Units	Population	%	Area (sq. km)
WEDU-DT Final TOA (13)	12600	25981	1.846	279.95
WMAZ-D13 TOA (13)	0	0	0.000	8.40
WMBB-D13 TOA (13)	98	237	0.017	16.86

Masking Summary:

	Total Interfe	erence	Unique Interf	erence
Call Letters	Population	%	Population	%
WEDU-DT Final TOA (13)	25981	1.846	25744	1.829
WMAZ-D13 TOA (13)	0	0.000	0	0.000
WMBB-D13 TOA (13)	237	0.017	0	0.000

Stations considered which do not cause interference:

WBFL-C (13-) WMAZ-D13 TOA (13) WTVT-D12 TOA (12)

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Call Letters City	State	Dist	Bear
WBFL-C (13-) Valdost WEDU-DT TOA (13) TAMPA WMAZ-D13 TOA (13) Macon WMBB-D13 TOA (13) Panama WTVT-D12 TOA (12) Tampa	FL GA	179.6 279.5 334.4 369.1	325.8 272.3

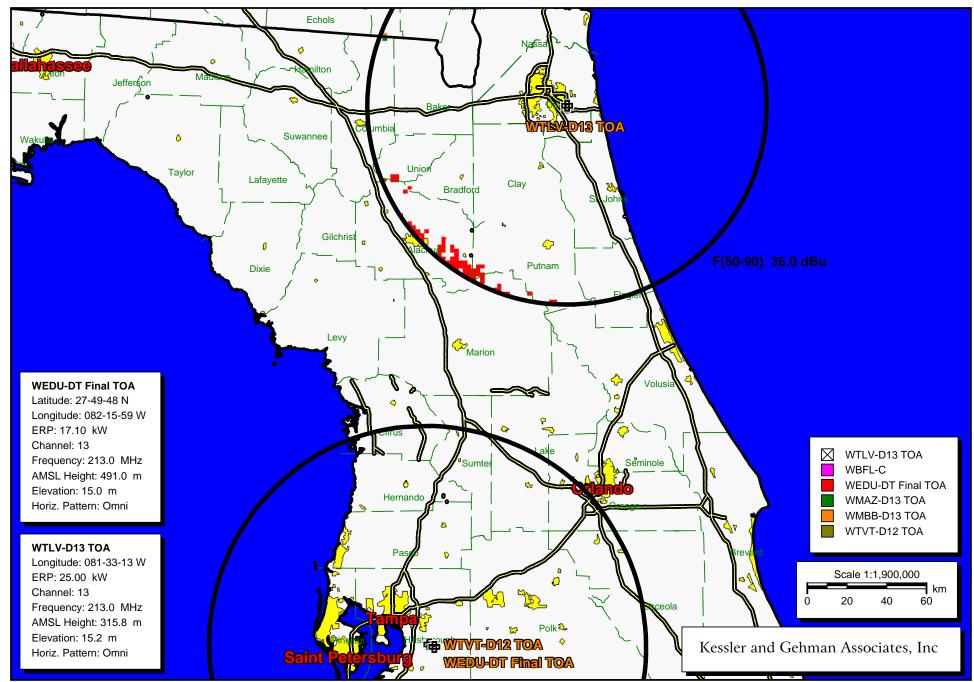
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Totals for WTLV-D (13)

### Inbound Longley-Rice Interference Study (WEDU-DT Final DTV TOA)

Calculation Area Po Not Affected by Ter Total NTSC Interfer DTV Only Interferer Total DTV Interferer Interfered Populati	rain Loss: rence: ace: ence:	1,407,226 0 25,981 25,981	( ( ( (	31447.1 0.0 288.4 288.4 288.4	sq. sq. sq. sq.	km ) km ) km ) km )
Percent Interference	ee:	1.85				
Terrain Blocked Pop Contour Area Popula		682 1,407,064	(	42.3	sq.	km)
Interference Free Breakdo	own:					
Black: Hispanic: Native American: Asian: Pacific Islander: Mixed Race: Other:	53,457 4,521 26,842 721	( 21.3% ) ( 3.9% ) ( 0.3% ) ( 1.9% ) ( 0.1% ) ( 1.4% )				

2 EXHIBIT 3



#### Inbound Longley-Rice Interference Study (WEDU-DT OMNI)

Kessler and Gehman Population Report

WTLV-D (13) Jacksonville, FL - BLCDT20040421AAH

Broadcast Type: Digital Service: T

Lat: 30-16-24 N Lng: 081-33-13 W ERP: 25.0 kW AMSL: 315.8 m

TV Incoming Interference Study

Interference Considered Within: Noise Limited FCC Contour

Signal Resolution: 2.0 km

LR Profile Spacing Increment: 1.0 km

Consider NTSC Taboo: Yes

# of radials computed for contours: 72
Contours calculated using 8 radial HAAT.

Threshold for reception: 36.0

Pop Centroid DB: 2000 US Census (SF1, Housing)

Study Date: 8/14/2007

TV Database Date: 8/11/2007

Primary Terrain: 3 Second US Terrain

Population Database: 2000 US Census (SF1)

Percentages calculated using a baseline population of 1,407,226.

Stations which cause interference:

Call Letters	H Units	Population	8 7	Area (sq. km)
WEDU-DT Final TOA (13)	12659	26113	1.856	292.68
WMAZ-D13 TOA (13)	0	0	0.000	8.40
WMBB-D13 TOA (13)	98	237	0.017	16.86

Masking Summary:

	Total Interfe	erence	Unique Interi	ference
Call Letters	Population	%	Population	%
WEDU-DT Final TOA (13)	26113	1.856	25876	1.839
WMAZ-D13 TOA (13)	0	0.000	0	0.000
WMBB-D13 TOA (13)	237	0.017	0	0.000

Stations considered which do not cause interference:

WBFL-C (13-) WMAZ-D13 TOA (13) WTVT-D12 TOA (12)

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Call Letters	City	State	Dist	Bear
WBFL-C (13-)	Valdosta	GA	179.6	291.0
WEDU-DT TOA	(13) TAMPA	${ t FL}$	279.5	194.6
WMAZ-D13 TOA	(13) Macon	GA	334.4	325.8
WMBB-D13 TOA	(13) Panama City	${ t FL}$	369.1	272.3
WTVT-D12 TOA	(12) Tampa	FL	280.1	194.0

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Totals for WTLV-D (13)

#### Inbound Longley-Rice Interference Study (WEDU-DT OMNI)

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Calculation Area Population: 1,407,908 ( 31489.4 sq. km )
Not Affected by Terrain Loss: 1,407,226 ( 31447.1 sq. km )
Total NTSC Interference: 0 ( 0.0 sq. km )
DTV Only Interference: 26,113 ( 301.1 sq. km )
Total DTV Interference: 26,113 ( 301.1 sq. km )
Interfered Population: 26,113 ( 301.1 sq. km )
Interference Free: 1,381,113 ( 31146.0 sq. km )

Percent Interference: 1.86

Terrain Blocked Population: 682 ( 42.3 sq. km)
Contour Area Population: 1,407,064

Interference Free Breakdown:

White: 979,538 ( 70.9% )
Black: 294,430 ( 21.3% )
Hispanic: 53,457 ( 3.9% )
Native American: 4,521 ( 0.3% )
Asian: 26,842 ( 1.9% )
Pacific Islander: 721 ( 0.1% )
Mixed Race: 19,606 ( 1.4% )
Other: 1,998 ( 0.1% )

Total: 1,381,113
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2 EXHIBIT 5